

A New Species of *Carex* (Cyperaceae) from Fiji: Pacific Plant Studies 6¹

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INTRODUCTION

CAREX IS THE LARGEST GENUS of the Cyperaceae, having well over 1,000 species. This genus of sedges is abundantly represented in the Arctic and Temperate Zones of the Northern Hemisphere. In the Tropics there are but few species. The genus extends to the continents of the Southern Hemisphere, but the representation there is meager. In the tropical Pacific, some islands support a very few species, while the others entirely lack the genus. In view of this distribution, it is of interest to announce a newly discovered species from Fiji.

A NEW FIJIAN CAREX

Carex vitiensis St. John, sp. nov. Fig. 1.

Rhizomatis breve caespitosis lignosis, culmis 9–10 dm. altis erectis nudis trigonis glabris striatis, laminis multis 7–8 dm. longis 4–6.5 mm. latis pallide viridibus longe acuminatis glabris striatis marginibus scabris, vaginis brunneis omnibus laminiferis, inflorescentiis 45–55 cm. longis 1–1.5 cm. latis interruptis, nodis 6–8, bracteis foliaceis ocreis anguste cylindricis inferis 4–6 cm. longis, laminis inferis 3–4.5 dm. longis, nodis 5–14-spiculiferis, spiculis adscendentibus androgynis lateralibus 2–6.5 cm. longis 1.5–3 mm. latis, pedunculis 1–11 cm. longis filiformibus scaberulis, floribus masculis paucis ad apicem spicorum, squamis foemineis 2.2–3.2 mm. longis obovatis nervosis glabris costis

viridibus marginibus hyalinis albidis apice mucroniferis, utriculis 4.8–5.2 mm. longis 1–1.2 mm. latis trigonis breve hirsutulis viridescens lateris plerumque valde trinervis corporibus anguste fusiformibus, stigmatibus 3, stylo inclusis, achaeniis 2.7–3 mm. longis lucidis stramineis trigonis corporibus anguste ellipticis lateribus canaliculatis ad basim cuneatis ad apicem et basim styli durescentibus contractis.

Forming dense clumps; rhizome short, densely caespitose, horizontal or descending, woody; culms 9–10 dm. tall, 1.5–2 mm. in diameter, central, erect, naked, sharply trigonous, glabrous, striate, greenish; leaves numerous, shorter than the culms, 7–8 dm. long, 4–6.5 mm. wide, flat, pale green, long tapering, glabrous, finely striate nerved, the margins scabrous; leaf sheaths brown, prominent, all leaf-bearing; inflorescence 45–55 cm. long, 1–1.5 cm. wide, elongate, interrupted, the nodes 6–8; the bracts with the base green, closely sheathing, long cylindric, the lowest one 4–6 cm. long, the others shorter, the blades foliaceous, exceeding their spikes, the lowest one 3–4.5 dm. long; spikes 5–14 at each node, slender peduncled, ascending or the tips slightly diverging; peduncles 1–11 cm. long, filiform, scaberulous; spikes androgynous, the lateral ones 2–6.5 cm. long, with a short staminate apex, the terminal one 2.5–5 cm. long with one or a few pistillate flowers at base; pistillate portion of spikes 1.5–3 mm. in diameter, slender cylindric, loosely flowered, the ascending perigynia partly imbricate; pistillate scales 2.2–3.2 mm. long, obovate, the back green, the margins hyaline and whitish, nerves numerous, parallel, close, glabrous except for the midrib excurrent into a scabrous awn $\frac{1}{3}$ to $\frac{1}{4}$ the length of the body; staminate scales similar but somewhat narrower and straw-colored; perigynia 4.8–5.2 mm. long, 1–1.2 mm. wide, trigonous, short white hirsutulous throughout, especially on the angles and beak, greenish, strongly nerved, usually with 3 nerves on each side and with marginal nerves, the body slender fusiform, tapering into a slender, rigidly bidentate beak nearly as long, the body with the two outer faces nearly plane, the inner side channeled; stigmas 3; style included; achene 2.7–3 mm. long, smooth, straw-colored, sharply trigonous, with wing-like angles and concave faces, the body narrowly elliptic, tapering to the 0.3 mm. stipitate

¹ This is the sixth in a series of papers designed to present descriptions, revisions, and records of Pacific island plants. The preceding papers were published as Bernice P. Bishop Museum Occasional Papers: 17 (7), 1942; 17 (13), 1943; 18 (5), 1945; *Amér. Fern Jour.* 35: 87–89, 1945; *Torrey Bot. Club Bul.* 73: 588, 1946.

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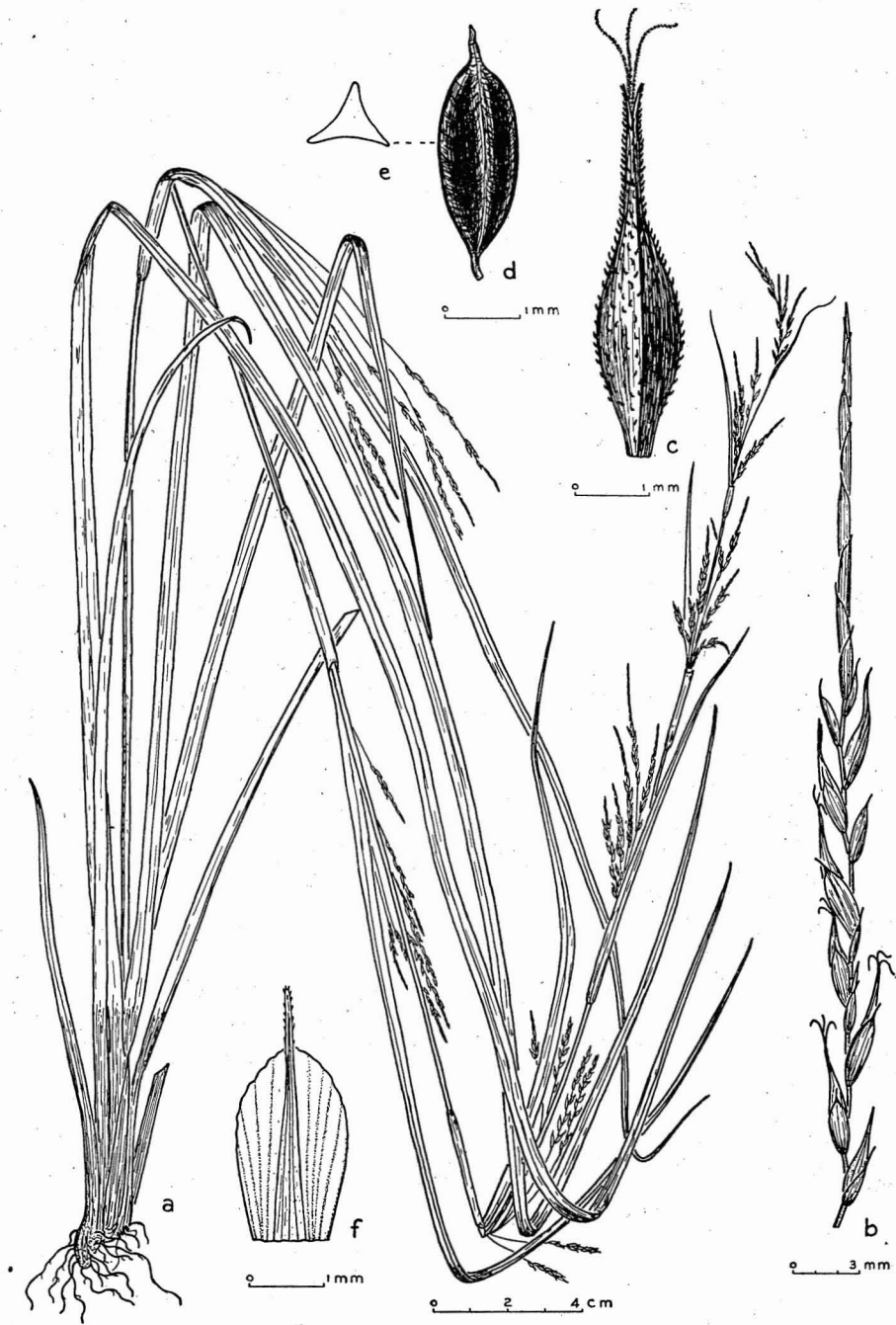


FIG. 1. *a*, habit of type specimen, *St. John* 18,330 ($\times \frac{1}{2}$); *b*, spike showing pistillate flowers below, and staminate scales above ($\times 3$); *c*, perigynium and stigmas ($\times 10$); *d*, lateral view of achene ($\times 10$); *e*, transverse median section of achene ($\times 10$); *f*, pistillate scale ($\times 10$).

base, contracted to the indurated cylindric persistent 0.2 mm. style base which is straight or slightly twisted.

FIJI ISLANDS: Viti Levu, Taunaisali, Wainisavulevu-Nubulolo divide, the central plateau between the Wainimala and Singatoka Rivers, clumps in swampy rain forest, 3,800 feet altitude, August 18, 1937, *H. St. John* 18,330 (type in Bishop Mus.).

There have been only three species of *Carex* known in the Fijian flora and none of them appears to be closely related to this new species.

The new *C. vitiensis* is a member of the subgenus *Eucarex* and apparently is to be placed within the ample limits of section *Elatae*. No very close relative is known, but it appears to be somewhat remotely related to *C. longibrachiata* Boeck. (*C. longifolia* R. Br., not of Thuill. or Host) of eastern Australia. *C. longibrachiata* Boeck. has the leaves exceeding the culms, coriaceous; the spikes androgynous or gynecandrous or rarely unisexual, the upper 1-2 strictly staminate,

the others pistillate, spikes rather densely flowered, narrowly cylindric, often pendulous; the perigynium 6 mm. long, long attenuate to the base, broadest near the middle, the beak about $1/4$ of the total length; and the achene obovate above the stipitate base, densely punctate, the indurated base of the style contorted. In contrast, the new *C. vitiensis* has the leaves about $4/5$ the length of the culms, chartaceous; the spikes androgynous, only the terminal ones largely staminate; spikes loosely flowered, very slender cylindric, erect or the tips slightly diverging; the perigynium 4.8-5.2 mm. long, short attenuate to the base, broadest $1/3$ of the way from the base, the beak about $1/3$ of the total length; and the achene narrowly elliptic above the stipitate base, smooth and shining, the indurated base of the style straight or slightly twisted.

The specific name is derived from the name of the island, Viti Levu, where the plant grows.